

**Abstract**

A handling device packs wood chips with a density greater than that achieved using conventional free-fall techniques by  $\geq 20\%$ -35%. The device includes a drum rotating about a generally horizontal axis that includes a plurality of outwardly extending  
5 blades that act to fling the wood chips so as to land with a substantially uniform orientation. The blades may comprise a leading face with at least a first face section that extends in a first direction and at least a second face section extending at a forward angle relative to the first section. The first direction may be generally normal to the drum core's peripheral surface. The output from the drum, when an input stream of  
10 wood chips is fed to the drum, covers an arc of at least  $90^\circ$ , typically in the range of  $90^\circ$ - $120^\circ$  and generally downwardly facing, when viewed from the side along the axis.